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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,552	01/27/2004	Dong-Keon Kong	46235	9586

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EXAMINER	
PEACHES, RANDY	
ART UNIT	PAPER NUMBER
2617	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/764,552	KONG ET AL.	
	Examiner	Art Unit	
	Randy Peaches	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-6,8-10,12,13 and 16-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-6,8-10,12,13 and 16-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/20/2006 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. ***Claims 1-2, 4-6, 8-10, 12-13 and 16-18*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar et al. (U.S. Patent Publication Number 2004/0120283 A1) in view of Silver et al. (U.S. Patent Number 6,961,578 B2).

Regarding ***claims 1 and 12***, Rezaiifar et al. discloses a method of paging in a wireless communication system (250), which reads on claimed "mobile communication systems,"

hereinafter referenced mobile communication systems the method comprising the steps of:

- a mobile station (MS-268), which reads on claimed "mobile terminal," transmitting a location registration message to a said wireless communication system (250) via the Base Transceiver Station (BTS-x 266) and the BSC_264, (see paragraph [0065]), wherein the wireless communications system comprises a circuit switched network. See FIGURE 1;
- the said wireless communication system (250) transmitting location information to a heterogeneous mobile communication system, hereinafter referenced as networks "heterogeneous mobile communication system 260 and 270", See FIGURE 6 and 7, which includes a Mobile Switching Center (MSC_1262), wherein the heterogeneous wireless communications system comprises a packet switched network providing both voice and data transmissions. See paragraph [0032] FIGURE 1. Rezaiifar et al. inherently provides support for the registering of the said MS in a respected network, as evidenced by the fact that one of ordinary skill in the art would have recognized the that referenced MS, as disclosed in paragraph [0067] that the said MS is performing a registering process with the network which included the sending of the respected information required for a successful registration.
- heterogeneous mobile communication system 260 and 270 requesting the said wireless communication system (250) to page the said mobile station according to the received information. See paragraph [0065]; and

- the mobile communication system paging the said mobile station. See paragraph [0065].

However, Rezaiifar et al. fails to clearly detail wherein the said location message includes information to determine whether or not a heterogeneous mobile communication system registers location information of the said terminal.

Silver et al. teaches in column 2 lines 61-67, column 3 lines 1-10 wherein location information from a packet switched network is received by a circuit switched network in order to initiate a call. Silver et al. continues in column 8 lines 34-64 and FIGURE 4 wherein the process of establishing a call is disclosed.

Therefore at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify Rezaiifar et al. (U.S. Patent Publication Number 2004/0120283 A1) to include Silver et al. (U.S. Patent Number 6,961,578 B2) in order to provide system capable of sending location information of a terminal to a corresponding network in a heterogeneous environment.

Regarding ***claim 2***, as the combination of Rezaiifar et al. and Silver et. al. are made, the combination according to ***claim 1***, Rezaiifar et al. continues to disclose wherein a step of the heterogeneous mobile communication system 260 and 270 setting up a packet data call with the mobile terminal and the heterogeneous mobile communication system 260 and 270 providing the mobile station with packet data service. See paragraph [0065].

Regarding ***claims 4 and 13*** as the combination of Rezaiifar et al. and Silver et. al. are made, the combination according to ***claims 1 and 12***, Rezaiifar et al. continues to disclose wherein the location information further includes a first identifier, which includes the sector id, 32-bit RAND or UATI. See paragraph [0044 and 0068-0069].

Regarding ***claims 5 and 17***, as the combination of Rezaiifar et al. and Silver et. al. are made, the combination according to ***claims 4 and 13***, Rezaiifar et al. continues to disclose wherein a step of the heterogeneous mobile communication system registering the first identifier and the location information. See paragraphs [0044 and 0071].

Regarding ***claims 6 and 18***, as the combination of Rezaiifar et al. and Silver et. al. are made, the combination according to ***claims 5 and 13***, Rezaiifar et al. continues to disclose wherein the heterogeneous mobile communication system changes the first identifier to a second identifier which is randomly generated to identify the mobile terminal. See paragraph [0069 and 0044].

Regarding ***claims 7 and 15***, as the combination of Rezaiifar et al. and Silver et. al. are made, the combination according to ***claims 1 and 12***, Rezaiifar et al. continues to disclose wherein the location registration message further includes information, wherein Rezaiifar et al. teaches in paragraph [0066] of the use of a hybrid protocol by providing communication through both the circuit-switched networks and a packet-switched network, in order to determine whether or not the heterogeneous mobile communication

system registers the location information of the mobile terminal. See paragraphs [006 and 0067].

Regarding ***claim 8***, Rezaiifar et al. discloses a method of cross-paging from wireless communication system (250) to a mobile station, the method comprising the steps of:

- determining whether the said mobile station has been location-registered in the wireless communication system (250) or in heterogeneous mobile communication system 260 and 270, see paragraph [0069] with reference to pre-registered location information of the said mobile station when paging request of the mobile terminal occurs in the said heterogeneous mobile communication system 260 and 270. See paragraph [0044 and 0074], wherein the wireless communications system comprises a circuit switched network. See FIGURE 1; and the heterogeneous mobile communication system 260 and 270, wherein the said heterogeneous network can support either CDMA 2000 or IS 856 only, which reads on claimed "provides packet data service." See paragraph [0065-0066];
- transmitting a cross-paging message from the said heterogeneous mobile communication system 260 and 270 to the mobile communication system if the mobile terminal has been location-registered in the mobile communication system. See paragraph [0049 and 0076-0078]; and
- transmitting a paging message to the mobile terminal in response to the cross-paging message in the mobile communication system. See paragraph [0065].

However, Rezaiifar et al. fails to clearly detail wherein the said terminal has been location registered in the heterogeneous system.

Silver et al. teaches in column 2 lines 61-67, column 3 lines 1-10 wherein location information from a packet switched network is received by a circuit switched network in order to initiate a call. Silver et al. continues in column 8 lines 34-64 and FIGURE 4 wherein the process of establishing a call is disclosed.

Therefore at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify Rezaiifar et al. (U.S. Patent Publication Number 2004/0120283 A1) to include Silver et al. (U.S. Patent Number 6,961,578 B2) in order to provide system capable of sending location information of a terminal to a corresponding network in a heterogeneous environment.

Regarding ***claim 9***, as the combination of Rezaiifar et al. and Silver et. al. are made, the combination according to ***claim 8***, Rezaiifar et al. continues to disclose wherein the heterogeneous mobile communication system determines that the mobile terminal has been location-registered in the mobile communication system if a pre-registered identifier is a first identifier for identification in the mobile communication system, and that the mobile terminal has been location-registered in the mobile communication system if a pre-registered identifier is a second identifier for identification in the heterogeneous mobile communication system. See paragraphs [0044 and 0047]

Regarding ***claim 10***, as the combination of Rezaiifar et al. and Silver et. al. are made, the combination according to ***claim 8***, Rezaiifar et al. continues to disclose wherein the cross-paging message includes information for requesting that a data call is set up with the heterogeneous mobile communication system 260 and 270. See paragraphs [0066].

Regarding ***claim 11***, as the combination of Rezaiifar et al. and Silver et. al. are made, the combination according to ***claim 8***, Rezaiifar et al. continues to disclose wherein the mobile communication system provides voice service and packet data service and the heterogeneous mobile communication system 260 and 270 provides packet data service. See paragraphs [0065 – 0066].

Regarding ***claim 16***, as the combination of Rezaiifar et al. and Silver et. al. are made, the combination according to ***claim 12***, Rezaiifar et al. continues to disclose wherein the mobile communication system pages to the mobile terminal. See paragraph [0065].

Response to Arguments

Applicant's arguments with respect to ***claim 1-2, 4-6, 8-10, 12-13 and 16-18*** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy Peaches whose telephone number is (571) 272-7914. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Randy Peaches
January 8, 2007

CHARLES APPIAH
PRIMARY EXAMINER